

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application.

Claims 1-19 are now present in this application, of which claims 1, 5, and 9 are independent. By this Amendment, claims 1, 5, 9, 15, 16, and 19 have been amended.

Reconsideration of this application is respectfully requested.

Request for Withdrawal of Finality of Office Action

Applicants respectfully submit that the Office Action improperly rejects claims 4, 8, and 10 over a combination of Dober in view of Nukaga or Otani while independent claims 1, 5, 9, from which these claims depend, have been rejected over Dober in view of either Allen or Cho. Furthermore, claims 11-13, 15-17, and 19 have been rejected over Dober in view of either Allen or Cho, either alone or further in view of Hosokawa.

Based on these rejections, Applicants must assume that the rejection of claims 4, 8, and 10 were made over Dober in view of Nukaga or Otani. However, as the Office Action required the modification of Dober by either Allen or Cho, their omission from the rejection of claims 4, 8, and 10, render the rejects as being improper, and impossible to understand.

For that reason, Applicants respectfully request that the finality of the Office Action be withdrawn, and that any subsequent rejection based on Dober in view of Nukaga or Otani be described with respect to the independent claims 1, 5, and 9.

Rejections under 35 U.S.C. § 103

Claims 1-3, 5-7, 9, 14 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dober in view of Allen or Cho; claims 4, 8, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dober in view of Nukaga or Otani; and claims 11-13, 15-17, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dober in view of Allen or Cho, either alone or in further view of Hosokwa. These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not being repeated here.

The Office Action states that the term “injecting” should be given its broadest reasonable interpretation and therefore reads on “any means forcing steam into the rotating drum (i.e. there is no structural limitations which clearly set forth how the ‘injecting’ of steam is performed). The Office Action further states that “steam in Dober is created by heated water and is forced into the drum in such a manner as to read on the broadly claimed ‘injecting’ step.” Finally, the Office Action states “[t]he Examiner further notes that the use of any conventional injecting means for applying the steam to the rotating drum would appear to be well within the level and skill generally available to one having ordinary skill in the art and the selection of one known injecting means over another to perform the same function would appear to be *prima facie* obvious.”

Applicants respectfully submit that these statements are incorrect for a number of reasons. First, it is true that claims are to be given the “broadest reasonable interpretation”. However, to argue that the mere generation of steam beneath a drum in a laundry machine and allowing that steam to expand into the drum is not a reasonable interpretation of the term “injecting.” While the Office Action identifies no dictionary to support the definition of injecting, the present application and claims provide some context for the term “injecting.” For example, at page 6, lines 24 and 25 state “when steam generated in the steam generator 110 reaches a pressure above a predetermined level, steam is injected to the laundry” In addition, claim 2 requires “terminating injection of steam to the laundry in the washing machine when a first pre-set time elapses,” Therefore, the term injecting does not apply to any means of delivering steam to a drum, but rather has a specific context that is not covered by Dober.

Second, there is nothing in Dober that suggest the steam is forced into the drum other than the spreading of the steam through the holes in the drum. Furthermore, there is nothing in Dober that suggests that it can be controlled so that the “injecting” is terminated after a pre-set time. In other words, even if the heater of Dober was turned off, the spreading of steam would still occur, which shows that Dober does not inject steam as defined by applicants.

Third, because Dober does not inject steam, the Examiners assertion that it would be obvious to replace the Dober system with another known injecting means cannot be supported. Specifically, because Dober does not describe injecting means, there can be no replacement for “one known injecting means over another.”

Finally, in order to further clarify Applicants position, each of the independent claims have been amended to require that the generated steam is injected to the laundry in the drum “directly” as opposed to the arrangement in Dober where the steam spreads to the laundry in the drum through holes in the drum.

For at least these reasons, Applicants respectfully submit that the combination of steps as set forth in independent claims 1, 5, and 9 are not disclosed or made obvious by the prior art of record utilized by the Examiner. Specifically, independent claim 1 recites a combination of steps in a method for smoothing wrinkles of the laundry in a washing machine including “injecting the generated steam to the laundry in the drum directly while rotating the drum of the washing machine.” Similarly, independent claim 5 recites a combination of steps in a method for smoothing wrinkles of the laundry in the washing machine including “injecting the generated steam for a first pre-set time to the laundry in the drum directly while rotating the drum of the washing machine.” And independent claim 9 recites a combination of steps in a method for smoothing wrinkles of the laundry in a drum-type washing machine including “injecting the generated steam for a first pre-set time to the laundry in the drum directly.”

As noted above, Dober fails to show or describe the “injecting” of steam. In addition, Dober discloses that steam is generated by means of a tub heater 12 located in the tub. As a result, the water for the steam is not separated from wash water. In contrast, the present invention provides a steam generator that is separated from the tub and water for the steam is not wash water stored in the tub. Therefore, clean water is used for generating steam.

None of the other references relied on by the Examiner were cited regarding these deficiencies with respect to Dober, and therefore, the § 103 rejections cannot be maintained.

Furthermore, Hosokowa is directed to a vertical axis type washing machine, as opposed to Dober, which is a horizontal axis type washing machine. In particular, the vertical axis type washing machine relies on laundry being fully submerged in wash water during the washing process while the horizontal axis washing machine relies on laundry being wetted, but not submerged in wash water. Accordingly, the soaking process, which is closely tied to cleaning efficiency, is different for the two types of washing machines.

Because a horizontal axis type washing machine cleans laundry by circumferentially lifting and dropping the laundry, the laundry is not submerged in wash water. One of ordinary skill in the art would not look to teachings from vertical axis washing machines to modify horizontal axis type washing machines since slight modifications could impact the cleaning efficiency and power consumption of the horizontal axis type washing machines. Therefore, because Hosokawa is not directed to a horizontal axis type washing machine it would not have been obvious to combine the teachings of Hosokawa with Dober.

In addition, according to Hosokawa, steam is supplied into a tub for increasing the temperature of the laundry, thereby increasing the dehydration efficiency. Therefore, the steam of Hosokawa is not a steam source for smoothing wrinkles in the laundry.

With regard to dependent claims 2-4, 6-8, and 10-19, Applicants submit that these claims depend, either directly or indirectly, from one of independent claims 1, 5, and 9, which are allowable for the reasons set forth above, and therefore these claims are allowable based on their dependence from one of claims 1, 5, and 9. Reconsideration and allowance thereof are respectfully requested.

Non-statutory Obviousness-Type Double Patenting Rejection

Claims 1-3, 5-7, and 9 stand provisionally rejected under the judicially created doctrine of non-statutory obviousness-type double patenting as being unpatentable over claim 8 of copending Application No. 11/181,801 and claim 5 of copending Application No. 10/751,978. These rejections are respectfully traversed.

With regard to claim 8 of Application No. 11/181,801, Applicants note that the present application was filed on January 14, 2004 and Application No. 11/181,801 was filed on July 15, 2005. According to M.P.E.P. § 804(I)(B):

The "provisional" double patenting rejection should continue to be made by the examiner in each application as long as there are conflicting claims in more than one application unless that "provisional" double patenting rejection is the only rejection remaining in at least one of the applications.

And according to M.P.E.P. § 8041(I)(B)(1) states:

If a "provisional" nonstatutory obviousness-type double patenting (ODP) rejection is the only rejection remaining in the earlier filed of the two pending applications, while the later-filed application is rejectable on other grounds, the examiner should withdraw that rejection and permit the earlier-filed application to issue as a patent without a terminal disclaimer. If the ODP rejection is the only rejection remaining in the later-filed application, while the earlier-filed application is rejectable on other grounds, a terminal disclaimer must be required in the later-filed application before the rejection can be withdrawn.

Based on these two provisions of the M.P.E.P., it is clear that a "provisional" nonstatutory obviousness-type double patenting rejection should not be maintained in this application once any other rejections regarding this application are overcome. Because Applicants submit that the § 103 rejections are improper, there are no other rejections remaining and this "provisional" nonstatutory obviousness-type double patenting rejection must be withdrawn.

With regard to claim 5 of pending Application No. 10/751,978, Applicants note that claim 5 has been canceled. Therefore, the "provisional" nonstatutory obviousness-type double patenting rejection must be withdrawn.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

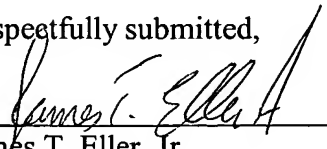
If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Chad D. Wells., Registration No. 50,875, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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